

Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A machine-implemented method of classifying an instance into one or more classes selected from a set of potential classes, comprising:

selecting from the set of potential classes a subset of two or more of the potential classes to which the instance is determined to most likely belong; and

applying to the instance a scrutiny classifier generated from a set of training records, each including a respective class label matching a corresponding to a class in set inclusive of the selected subset of classes, to identify at least one class to which the instance most likely belongs.

Claim 2 (original): The method of claim 1, wherein the subset of classes is selected based upon assignment to each of the potential classes a probability estimate of the instance belonging to the class.

Claim 3 (original): The method of claim 2, wherein the selected subset of classes consists of a preselected number of potential classes having highest assigned probability estimates.

Claim 4 (original): The method of claim 2, wherein the selected subset of classes consists of a number of potential classes having highest assigned probability estimates and a cumulative assigned probability estimate exceeding a preselected threshold.

Claim 5 (original): The method of claim 2, wherein the probability estimates are assigned to each potential class by applying to the instance a ballpark classifier generated from a set of training records corresponding to the set of potential classes.

Claim 6 (original): The method of claim 5, wherein the ballpark classifier is generated by a Naïve Bayes inducing algorithm.

Claim 7 (original): The method of claim 1, wherein the subset of classes is selected based at least in part upon a prescribed misclassification cost.

Claim 8 (original): The method of claim 1, wherein the scrutiny classifier is generated by a Naïve Bayes inducing algorithm.

Claim 9 (original): The method of claim 1, wherein the scrutiny classifier is generated by a decision tree inducing algorithm.

Claim 10 (original): The method of claim 1, further comprising generating the scrutiny classifier from the set of training records.

Claim 11 (currently amended): The method of claim 10, wherein the scrutiny classifier is generated ~~on-the-fly~~ from the ~~the~~ [[a]] set of training records corresponding to the selected subset of classes after the subset of classes has been selected.

Claim 12 (original): The method of claim 10, wherein the scrutiny classifier is generated beforehand in anticipation of the instance to be classified.

Claim 13 (original): The method of claim 12, wherein the scrutiny classifier is generated based upon an occurrence probability estimate for the inclusive class set.

Claim 14 (original): The method of claim 13, further comprising selecting an inclusive class set encompassing the selected subset of classes from which to generate the scrutiny classifier.

Claim 15 (original): The method of claim 1, further comprising applying to the instance a classifier generated from a set of training records corresponding to two or more

classes identified by the scrutiny classifier to identify at least one class to which the instance is determined to most likely belong.

Claim 16 (currently amended): A data processing machine system for classifying an instance into one or more classes selected from a set of potential classes, comprising:

a ballpark classifier configured to select from the set of potential classes a subset of two or more classes to which the instance is determined to most likely belong; and

a scrutiny classifier generated from a set of training records, each including a respective class label matching a corresponding to a class in the set inclusive of a subset of classes selected by the ballpark classifier for a given instance, the scrutiny classifier being configured to identify from the selected subset of classes at least one class to which the instance most likely belongs.

Claim 17 (currently amended): The machine system of claim 16, wherein the ballpark classifier is generated from a set of training records corresponding to the set of potential classes.

Claim 18 (currently amended): The machine system of claim 16, further comprising an inducer configured to generate a scrutiny classifier from a subset of the training records corresponding to a class set inclusive of a subset of classes selected by the ballpark classifier for a given instance.

Claim 19 (currently amended): The machine system of claim 18, wherein the inducer is configured to generate the scrutiny classifier ~~on-the-fly~~ from the ~~the~~ [[a]] set of training records corresponding to the selected subset of classes after the subset of classes has been selected.

Claim 20 (currently amended): A computer program residing on a computer-readable medium for causing a processor executing the computer program to classifying an instance into one or more classes selected from a set of potential classes, the computer program comprising instructions to:

Applicant : George H. Forman
Serial No. : 09/844,202
Filed : April 26, 2001
Page : 5 of 18

Attorney's Docket No.: 10010075-1
Reply to Office action dated March 5, 2004

select from the set of potential classes a subset of two or more classes to which the instance is determined to most likely belong; and

apply to the instance a scrutiny classifier generated from a set of training records, each including a respective class label matching a corresponding ~~to a class in set inclusive of~~ the selected subset of classes, to identify at least one class to which the instance most likely belongs.